

Overhead Highway Will Mean End of Stalls in Wichita Falls

by S. Scot Litke



Texas Shafts signature core barrel used for sandstone removal.

This is an article with two themes, both focusing on the activities of Texas Shafts, Inc., Fort Worth, Texas. One area of exploration has to do with a very interesting recently completed project undertaken for the Texas Highway Department and under contract to the North Texas Division of Austin Bridge & Road, Inc. The second theme deals with the company itself, Texas Shafts, Inc. This north Texas firm is breaking new ground in more ways than one.

First the project. In March of 1999, Texas Shafts began work on its part of the construction of a segment of Wichita County IH 44 and US 287, which goes right through the center of Wichita Falls, Texas. Wichita Falls happens to be the summer home of the Dallas Cowboys, one of the NFL's leading football franchises, but that's another story. This particular stretch of highway has long been a major bottleneck through the city. Basically,

traffic in both directions on US Highway 287, which is a major cross-state highway, funnels down from four high-speed lanes into downtown Wichita Falls, traffic

lights and all. The solution to this perennial traffic jam was to construct an overpass on a portion of IH 44 which currently runs north-south through a very busy part of town. The "fix" has been on the drawing board for sometime, actually since the mid 60's. Thanks to a major effort between the Texas DOT and the City of Wichita Falls, and through a commitment to serious "Partnering", drawings are finally becoming structures.

Using a Watson 3100 CM and a Hughes LDH, Texas Shafts drilled over 16,500 linear feet installing 500 drilled shafts ranging from 24" to 72" in diameter, and depths between 30' and 60'. Most of these shafts were fully cased to bearing material and then poured in the dry. With the exception of several shafts installed under very low clearance conditions, all of the casing was temporary, being

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Texas DOT geotechs performed soils investigation and inspection chores. Slump test confirms mix. Cylinders will provide further confirmation of 3,600 psi concrete.



Full length reinforcing cages for all shafts.

extracted during the concreting operation. For the most part, the shafts were installed in red shaley clay and hard sandstone with a clay

selfs, were constantly bathed in cold water. Needless to say, workers had to be on the constant alert for the possibility of their own dehydration and heat related health issues. Concrete was placed as rapidly as possible, which was a 3,600 PSI class C mix and employed the use of an effective retarder. The 8,500 cubic yards were placed without any problems and at a rate of up to 200 yards per day.

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and water bearing sand overburden. Gravels and cobbles were also encountered at a number of shaft locations.

The drilling conditions, while being described as straight forward relative to depth, diameters and materials to be excavated, still presented other logistical problems. Due to the fact that this stretch of highway is the main thoroughfare through Wichita Falls, drilling had to take place in such a way as to not interfere with the substantial traffic flow. Most of the construction took place during the notorious Texas summer with 100+ degree days a constant. In order to cope with the extreme heat, piles of aggregate as well as the concrete trucks them-

The tight site condition required that the rebar reinforcing cages consisting of #11 bars and 1/2" spirals, be fabricated at a central area and then transported to each shaft location. All cages extended to the full depth of each shaft.

In addition to the work described, the project called for limited access, low overhead shaft installation. For this phase of the work, Texas Shafts engaged the services of ADSC Member firm, S & W Foundation Contractors, Richardson, Texas. Tom Witherspoon's crew was charged with installing 30" diameter and 40' deep shafts designed to add strength to an existing pier cap.

Harry Harris and James Alvis handled the supervisory chores for Texas Shafts. Texas Shafts had the overall contractual responsibility for drilling, casing, tying and placing reinforcing, and furnishing and placing the concrete. Reinforcing steel cage tying duties went to Breda Company, Houston, Texas, with concrete being furnished by City Concrete, Wichita Falls, Texas. Most of the lifting operations were carried out by a Link Belt 50 ton rough terrain crane.

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Material on auger confirms expected soil profile.



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WICHITA FALLS Contd.



Merchants anxiety about interference with business activity was abated by open communication and sensitive planning.

This project is the first mainline bridge in Texas to use a cantilever design which requires that the shafts act in compression and uplift.

Throughout the pre-construction

and construction process, the project has been under close media scrutiny as the route is very congested and surrounded by businesses that were concerned by the project's impact on their livelihood. The entire process has been rendered successful due to the out-front commitment of the City of Wichita Falls, Texas DOT, local business and the police, to work creatively with all of the construction partners.

Most of the construction took place during the notorious Texas summer with 100+ degree days a constant.

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Confluence of IH 44 and US 287 will soon move rapidly through Wichita Falls, Texas.

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**Texas Shafts,
Another Story**

There is always a story behind the story. In this case, it is the progressive operation of Texas Shafts, Inc. The firm's lead management team of Marie and Ty Savage and Roger Pool have made a commitment to excellence through training, maintaining a first class fleet of equipment, employee incentive programs, professionalism at every level, and a universally enforced safety program.

The Texas Shafts yard is organized, debris free and set up in such a way as to maximize efficiency. Rigs are cleaned regularly in a state of the art "microbe cleaning bay." Designed

by Ty Savage and shop superintendent, Randy Harris, this facility is modeled after work done in the oil field where microbe technology
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Texas Shafts' state-of-the-art repair facility.



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Special work requires special tools often made in Texas Shafts shop.

is used to deal with spills. Anyone who has ever been around drilling equipment knows that oil is part of life. Controlling it is critical. This re-circulating bath fills the bill.

Texas Shafts is one of the first companies of its size to employ a full-time recruitment and training professional.

Texas Shafts recently completed a new shop facility. Rigs are under constant maintenance and repair. Highly skilled mechanics work under excellent conditions keeping the Texas Shafts fleet of 75 road-ready vehicles on its feet. A complete parts facility, a separate, immaculate mechanical repair shop, and personnel lounge, are housed in this facility which was completed in the spring of 1999.

Safety rules are rigorously applied, even in the five acre yard, repair

shops, and throughout the maintenance facility. No hard hat – no entry. Period!

Texas Shafts is one of the first companies of its size to employ a full-time recruitment and training professional. These duties are handled by Dave Brock. All of Texas Shafts' 70 full-time employees are exposed to a variety of training programs. A special

touch is evidenced by the company's graduate Hard Hat Program. New hires wear yellow hard hats. Known as the "Nectar Heads," these folks receive help from more experienced hands. After 90 days, these graduate to "Red Hats." As workers move up the efficiency ladder, they finally arrive at the "Blue Hat" level.

The efficient performance on IH 44 and 287 in Wichita Falls is but one result of Texas Shafts "M.O." where "excellence is not our goal, it is our standard."

Executive staff meetings are held every Monday over lunch where the week's work is laid out, project reports are made, and further plans take shape. At these meetings, open communication is the key. 90% of

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Weekly Monday lunch meetings assures that all department heads are on the same page. Left to right – Marie Savage, Roger Pool, Dave Brook, Gary Martin, Brad Allen, Harry Harris, Randy Harris, and Ty Savage. Kary Savage, another member of the management team, was not present for this photo.

Texas Shafts' work is in the highway sector, with the firm working throughout Texas and into Oklahoma. General Superintendent, Brad Allen, has his hands full keeping the variety of projects on schedule.

Pride, a commitment to safety, maintaining an effective team, taking innovative approaches to management, administration and construction techniques, are part and parcel of the Texas Shafts success story. The efficient performance on IH 44 and 287 in Wichita Falls is but one result of Texas Shafts "M.O." where "excellence is not our goal, it is our standard." ■



The picture tells the story.

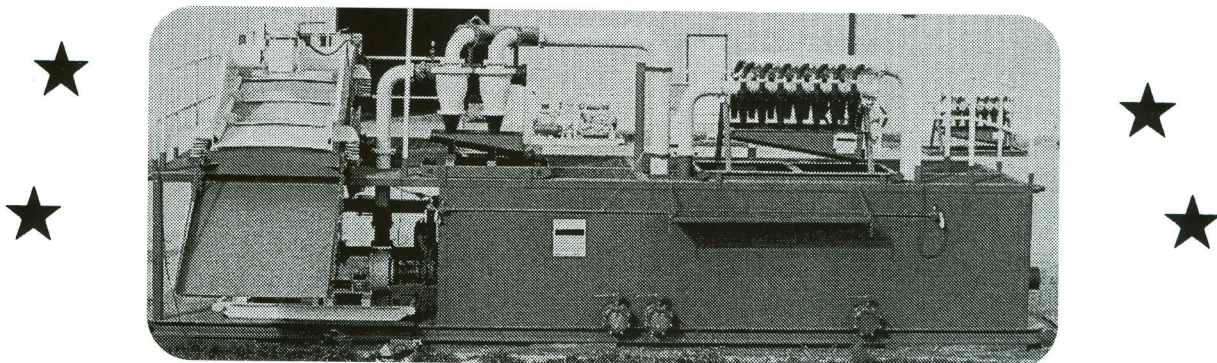


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